

11. (Amended) X-ray anode according to claim 1, characterized in that the intermediate layer is an adhesion-promoting layer.

12. (Amended) X-ray anode according to claim 1, characterized in that the intermediate layer is a radiation filter.

13. (Amended) X-ray anode according to claim 1, characterized in that a temperature sensor is provided.

15. (Amended) Use of an x-ray anode according to claim 1 for x-ray microscopes.

16. (Amended) Use of an x-ray anode according to claim 1 for x-ray units.

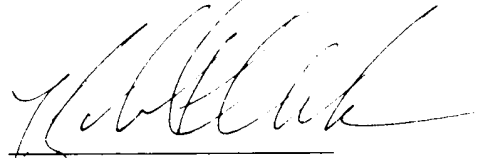
REMARKS

Entry of the foregoing replacement sheets upon which the International Preliminary Examination Report is based and amendment of the specification and claims are respectfully requested. Applicants note that the instant amendments have been made to generally improve the form of the application and remove multiply dependent claims prior to the calculation of fees.

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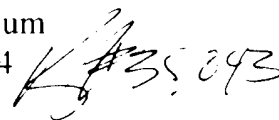
Should there be any questions, the Examiner is invited to contact the undersigned at the below listed number.

Respectfully submitted,
Matthias FRYDA et al.



Neil F. Greenblum

Reg. No. 28,394



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GREENBLUM & BERNSTEIN, P.L.C.
1941 Roland Clarke Place
Reston, VA 20191
(703) 716-1191

APPENDIX

Marked-Up Copies of the Amended Paragraphs:

Please replace paragraph [0002] with the following amended paragraph:

[0002] In x-ray production, metallic anode material is usually [impinged on] irradiated with electrons. The radiation caused by characteristic electronic transitions exits the apparatus through a window transparent for x-rays. In order to avoid absorption, X-ray production results here at low gas pressures. The transparent window serves to separate the low pressure area from the outside area.

Please replace paragraph [0010] with the following amended paragraph:

[0010] However, it has been possible to prove with experiments that these disadvantages could be overcompensated by a diamond substrate. Contrary to expectations, it is possible to work with a much smaller focus with an x-ray anode on a diamond window than it is with an x-ray anode on a beryllium window. The reason for the overcompensation is that diamond is an excellent heat conductor, so the thermal energy produced can be dissipated with particular efficiency through the diamond substrate. The focal spot therefore heats up less and it is possible to [increase the focus] decrease the focus diameter. This leads, as desired, to greater radiation densities. Conversely, exchanging a diamond window for the beryllium window with the same beam density and operating life renders possible a thinner anode with lower absorption of x-radiation.

Marked-Up Copies of the Amended Claims:

4. (Amended) X-ray anode according to [at least one of claims 1 through 3] claim 1, characterized in that the anode material is a metal, an alloy or several layers of metal.

5. (Amended) X-ray anode according to [at least one of claims 1 through 4] claim 1, characterized in that the anode material thickness is between 1 μm and 25 μm .

8. (Amended) X-ray anode according to [at least one of claims 1 through 7] claim 1, characterized in that the anode material completely covers the window.

9. (Amended) X-ray anode according to [at least one of claims 1 through 8] claim 1, characterized in that the anode material partially covers the window.

10. (Amended) X-ray anode according to [at least one of claims 1 through 9] claim 1, characterized in that an intermediate layer is provided between the x-ray anode and the diamond window.

11. (Amended) X-ray anode according to [at least one of claims 1 through 10] claim 1, characterized in that the intermediate layer is an adhesion-promoting layer.

12. (Amended) X-ray anode according to [at least one of claims 1 through 11] claim 1, characterized in that the intermediate layer is a radiation filter.

13. (Amended) X-ray anode according to [at least one of claims 1 through 12] claim 1, characterized in that a temperature sensor is provided.

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15. (Amended) Use of an x-ray anode according to [at least one of claims 1 through 14] claim 1 for x-ray microscopes.

16. (Amended) Use of an x-ray anode according to [at least one of claims 1 through 14] claim 1 for x-ray units.